

8-6 Conic Sections

$$Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0$$

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If $A = 0$ or $C = 0$, but not both, what type of graph is it?

parabolas

$$Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0$$

If $A = C$, what type of graph is it?

Circle

$$Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0$$

If A and C have the same sign, but $A \neq C$, what type of graph is it?

Ellipse

$$Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0$$

If A and C have the different signs, what type of graph is it?

hyperbola